

Figure A-322. Boeing 720B, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-9)

No. of Engines 3 Engine Rating 14,500 lb

Min. T/O Wt. 101.4 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 160.0 k-lb Max. T/O Wt. War-Time 169.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,750 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 128.1 k-lb Max. Ldg. Wt. 142.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,900 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,250 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | | |
|--------|--------------------------|-------------|----------|----------|-----------------------------|-----------|-------------|----------|------------------|
| | High A | Medium B | Low C | Low D | Ultra | High A | Medium B | Low C | Very Low D |
| 128 | 32 | 34 | 36 | 38 | | 30 | 31 | 34 | 38 |
| 143 | 37 | 38 | 41 | 43 | | 34 | 35 | 39 | 43 |
| 160 | 42 | 43 | 47 | 49 | | 38 | 40 | 45 | 49 |
| 169 | 45 | 47 | 50 | 52 | | 41 | 43 | 48 | 52 |

Figure A-323. Boeing 727-100

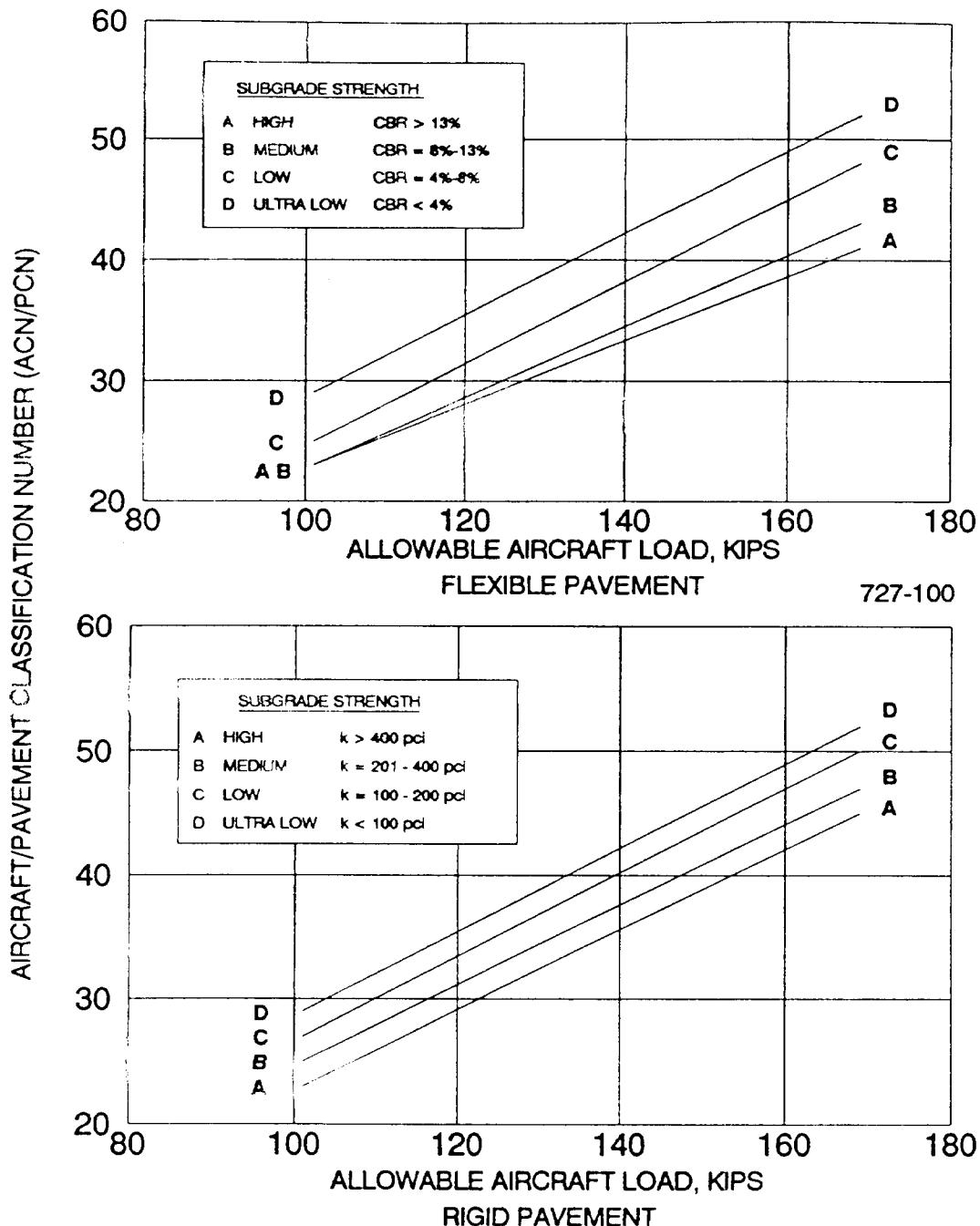


Figure A-324. Boeing 727-100, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-9)

No. of Engines 3 Engine Rating 14,500 lb

Min. T/O Wt. 104.9 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 160.0 k-lb Max. T/O Wt. War-Time 169.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,750 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 136.6 k-lb Max. Ldg. Wt. 142.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,100 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,250 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | | Very Low D |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|----|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | | |
| 137 | 35 | 36 | 39 | 41 | 32 | 34 | 37 | 41 | |
| 143 | 37 | 38 | 41 | 43 | 34 | 35 | 39 | 43 | |
| 160 | 42 | 43 | 47 | 49 | 38 | 40 | 45 | 49 | |
| 169 | 45 | 47 | 50 | 52 | 41 | 43 | 48 | 52 | |

Figure A-325. Boeing 727-100C

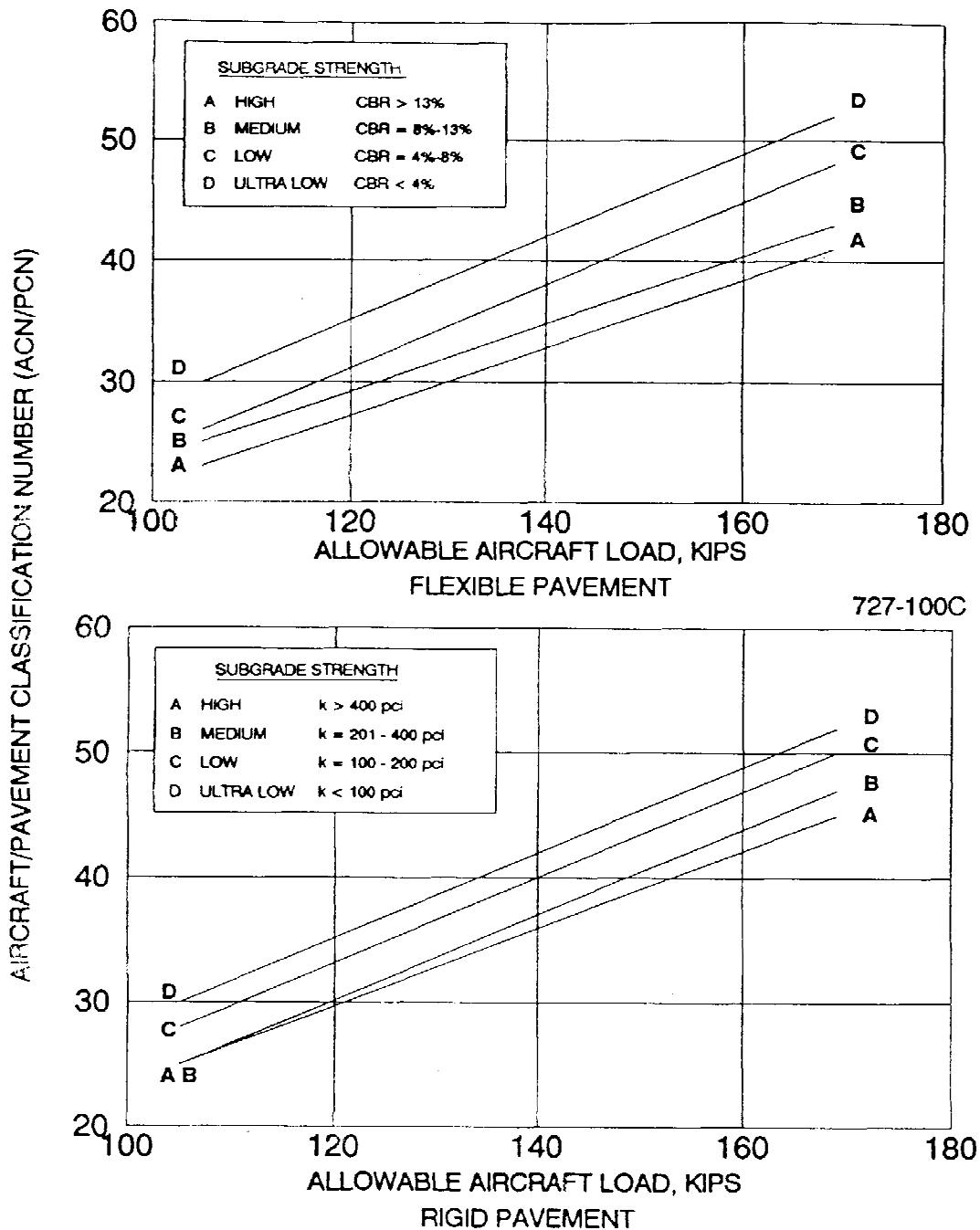


Figure A-326. Boeing 727-100C, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-17R)

No. of Engines 3 Engine Rating 17,400 lb

in. T/O Wt. 119.8 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 209.5 k-lb Max. T/O Wt. War-Time 209.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 9,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 150.4 k-lb Max. Ldg. Wt. 161.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,600 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | Very Low D |
| 150 | 39 | 40 | 44 | 45 | 35 | 37 | 42 | 46 |
| 161 | 42 | 44 | 48 | 49 | 38 | 40 | 45 | 49 |
| 210 | 58 | 62 | 65 | 67 | 52 | 55 | 61 | 66 |

Figure A-327. Boeing 727-200

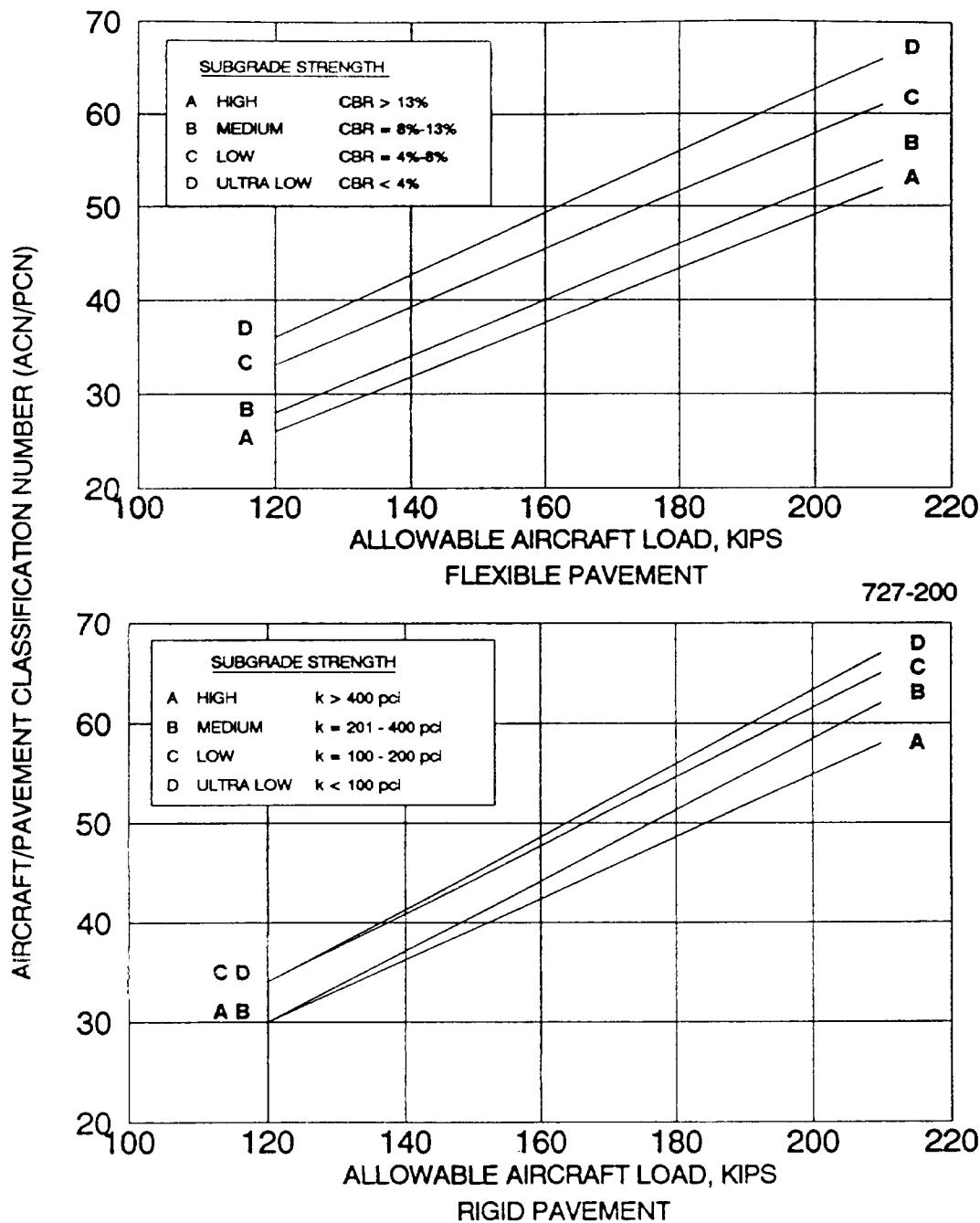


Figure A-328. Boeing 727-200, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-7)

No. of Engines 2 Engine Rating 14,000 lb

Min. T/O Wt. 70.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 110.0 k-lb Max. T/O Wt. War-Time 110.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 92.8 k-lb Max. Ldg. Wt. 99.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,500 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | | Very Low D |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|----|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | | |
| | | | | | | | | | |
| 93 | 23 | 24 | 26 | 27 | 21 | 21 | 24 | 27 | |
| 99 | 25 | 26 | 27 | 29 | 22 | 23 | 26 | 29 | |
| 110 | 28 | 29 | 31 | 32 | 25 | 26 | 29 | 33 | |

Figure A-329. Boeing 737-100

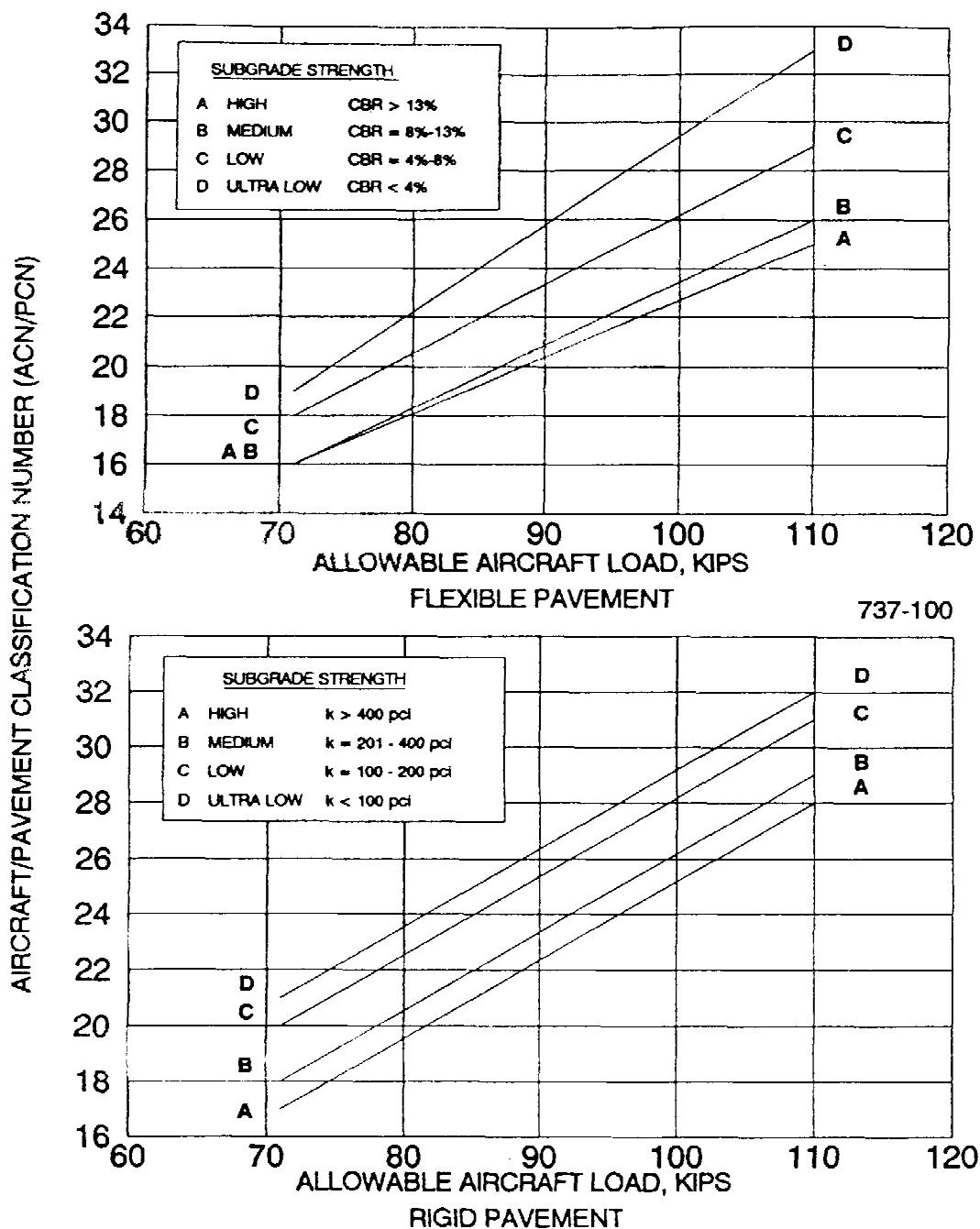


Figure A-330. Boeing 737-100, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-17R/17AR)

No. of Engines 2 Engine Rating 17,400 lb

Min. T/O Wt. 76.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 128.1 k-lb Max. T/O Wt. War-Time 128.1 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,800 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 98.6 k-lb Max. Ldg. Wt. 107.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | Very Low D |
| 99 | 26 | 27 | 28 | 29 | 22 | 23 | 26 | 29 |
| 107 | 28 | 29 | 31 | 32 | 24 | 25 | 28 | 32 |
| 128 | 34 | 35 | 37 | 39 | 29 | 31 | 34 | 39 |

Figure A-331. Boeing 737-200

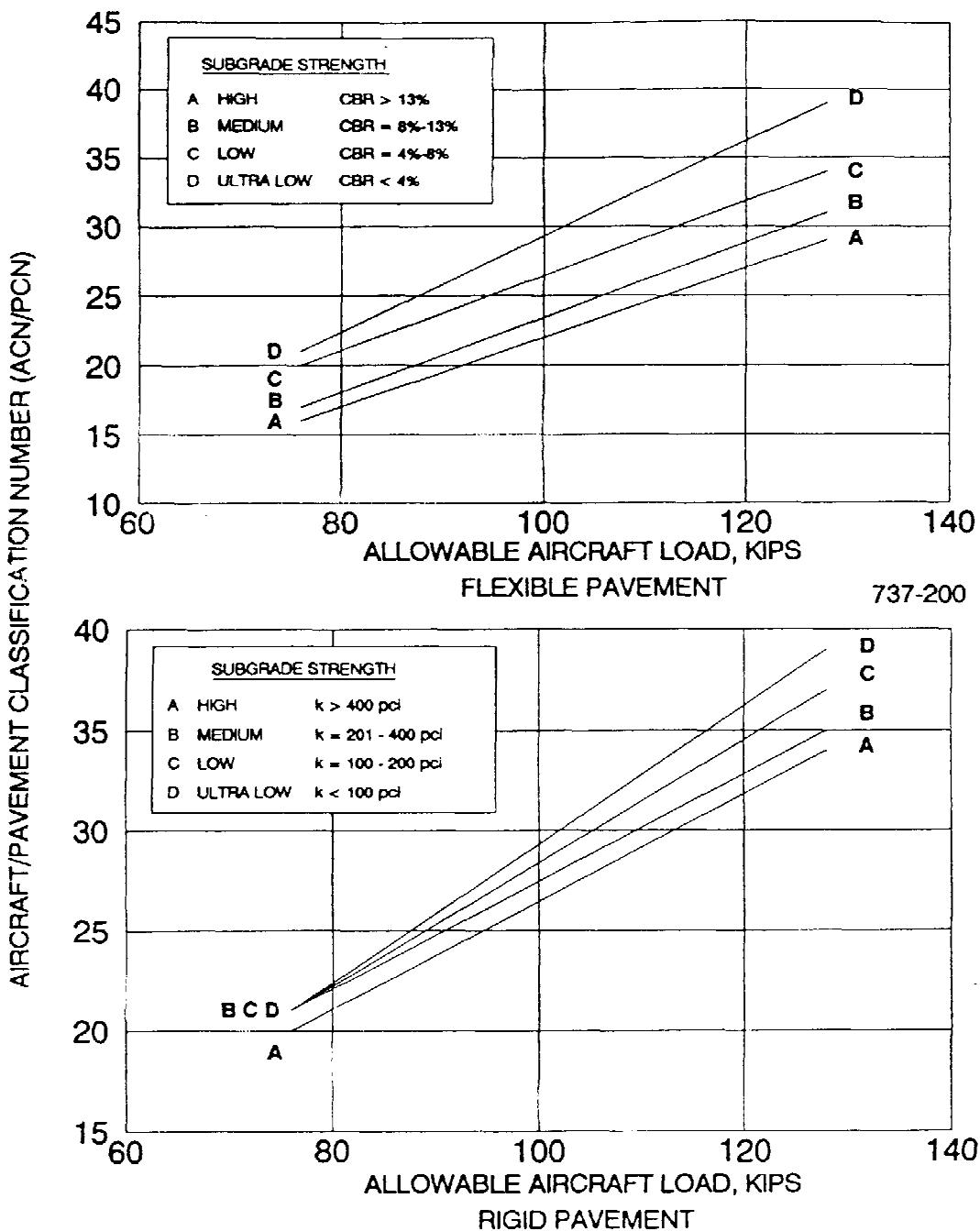


Figure A-332. Boeing 737-200, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer CFM International (CFM56-3B1)

No. of Engines 2 Engine Rating 20,000 lb

Min. T/O Wt. 83.6 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 135.0 k-lb Max. T/O Wt. War-Time 135.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 110.2 k-lb Max. Ldg. Wt. 114.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,400 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | Very Low D |
| 110 | 29 | 30 | 32 | 33 | 25 | 26 | 29 | 33 |
| 114 | 30 | 32 | 33 | 35 | 26 | 27 | 31 | 34 |
| 135 | 37 | 38 | 40 | 42 | 32 | 33 | 37 | 41 |

Figure A-333. Boeing 737-300

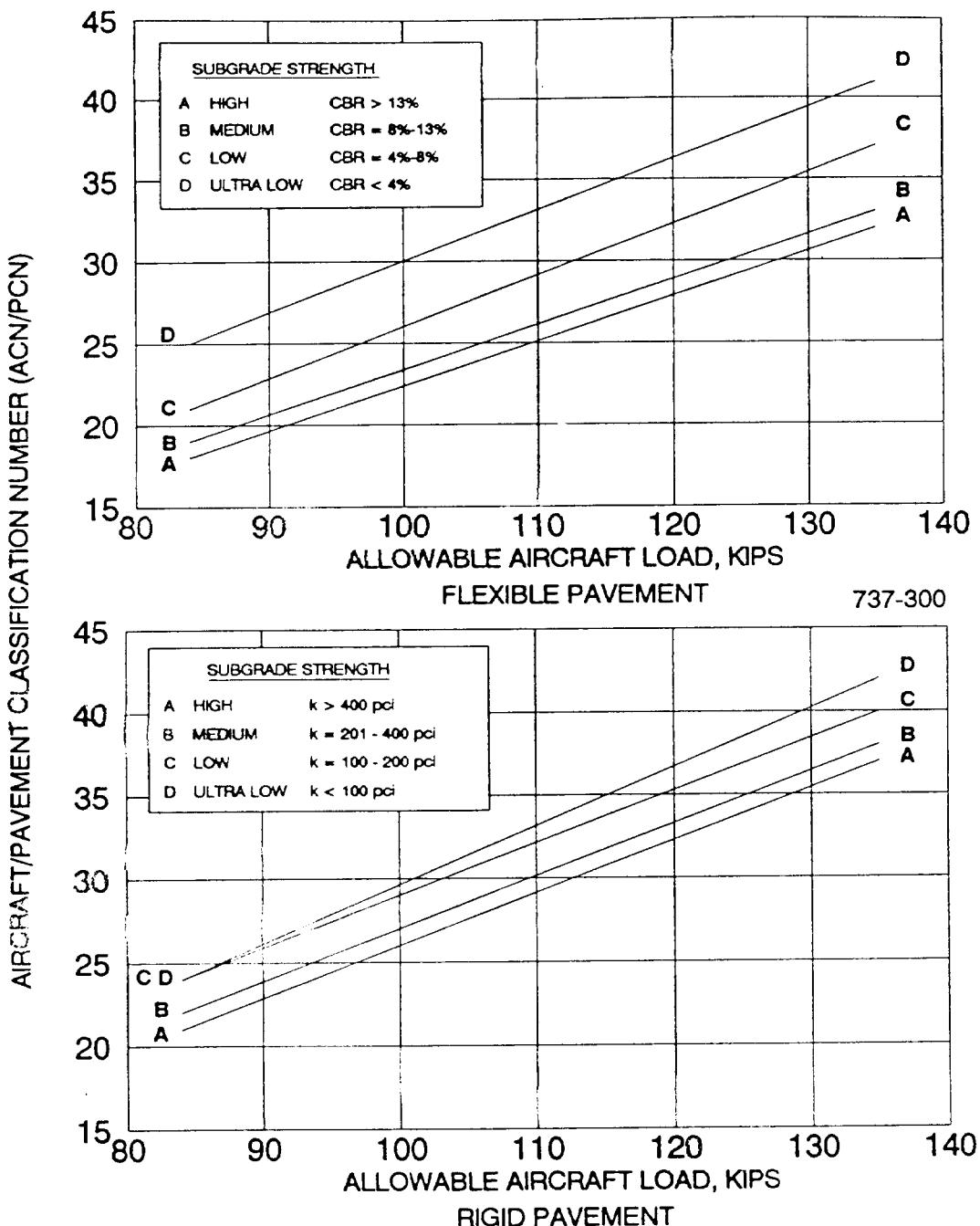


Figure A-334. Boeing 737-200, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer CFM International (CFM56-3C)

No. of Engines 2 Engine Rating 23,500 lb

Min. T/O Wt. 85.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 150.0 k-lb Max. T/O Wt. War-Time 150.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,100 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 120.7 k-lb Max. Ldg. Wt. 124.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,200 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | Very Low D |
| 121 | 34 | 36 | 37 | 39 | 29 | 31 | 34 | 38 |
| 124 | 35 | 37 | 38 | 40 | 30 | 32 | 35 | 39 |
| 150 | 43 | 45 | 47 | 49 | 37 | 39 | 43 | 48 |

Figure A-335. Boeing 737-400

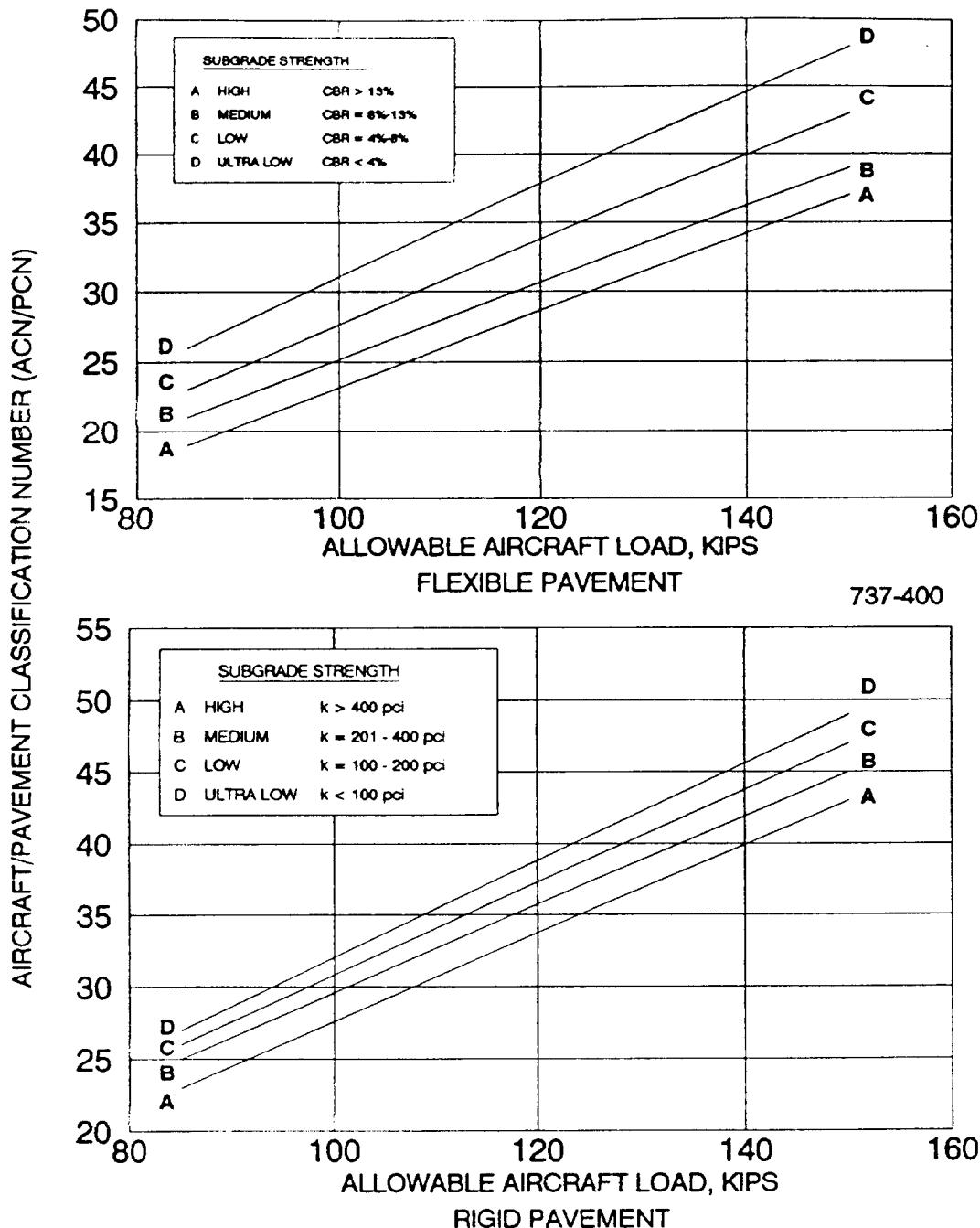


Figure A-336. Boeing 737-400, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Rolls-Royce (RB211-524C2)

No. of Engines 4 Engine Rating 51,500 lb

Min. T/O Wt. 465.4 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 750.0 k-lb Max. T/O Wt.. War-Time 750.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 9,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 573.8 k-lb Max. Ldg. Wt. 585.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,200 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,300 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | Very Low D |
| 574 | 31 | 35 | 42 | 49 | 34 | 37 | 44 | 57 |
| 585 | 32 | 36 | 43 | 50 | 35 | 38 | 45 | 58 |
| 750 | 42 | 50 | 60 | 68 | 46 | 52 | 63 | 82 |

Figure A-337. Boeing 747-100B

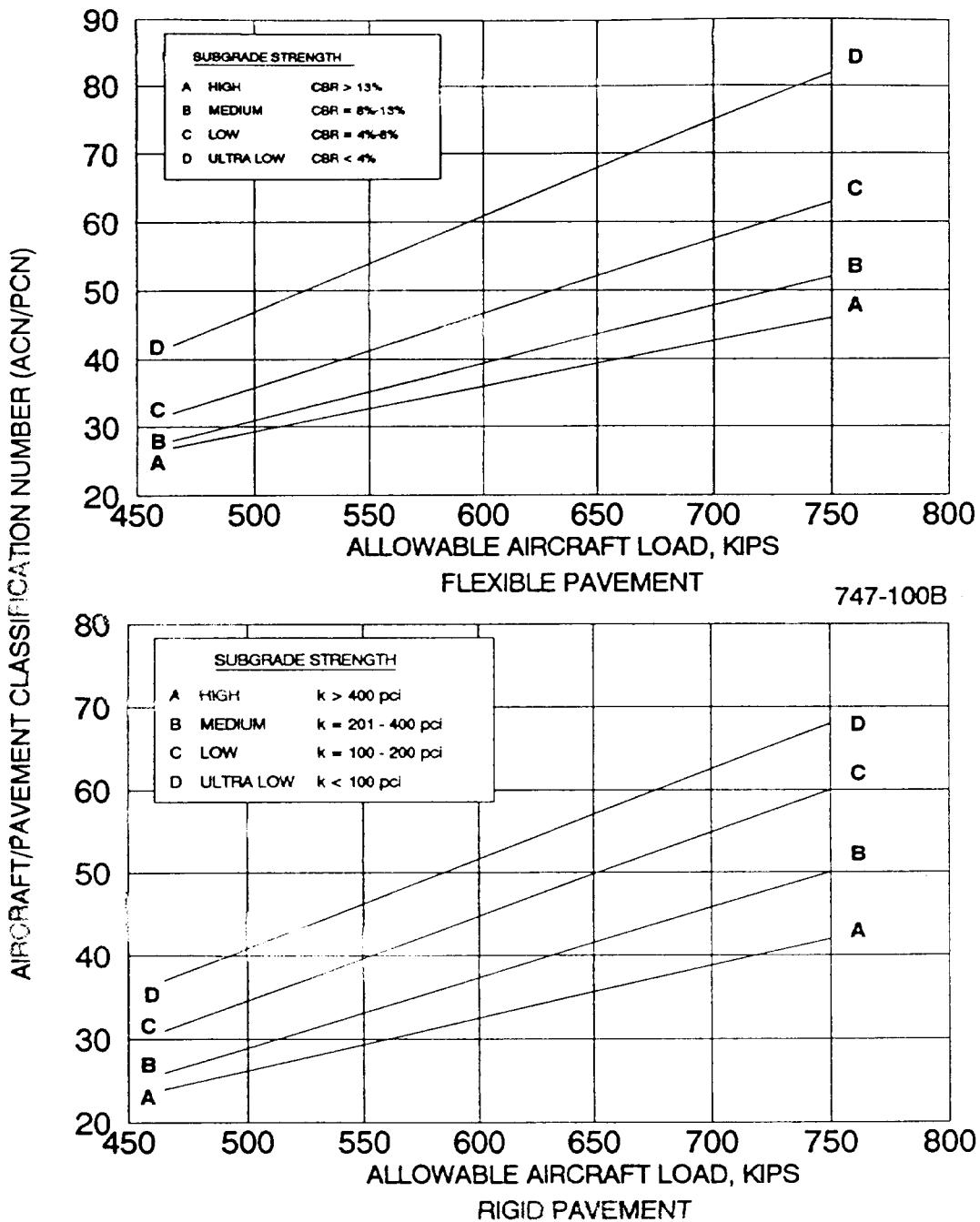


Figure A-338. Boeing 747-100B, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT9D-7R4G2)

No. of Engines 4 Engine Rating 54,000 lb

Min. T/O Wt. 470.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 833.0 k-lb Max. T/O Wt. War-Time 833.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,200 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 557.9 k-lb Max. Ldg. Wt. 630.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | |
|--------|--------------------------|-------------|----------|----------|-----------------------------|-------------|----------|------------------|
| | High A | Medium B | Low C | Low D | High A | Medium B | Low C | Very Low D |
| 558 | 30 | 34 | 41 | 47 | 33 | 36 | 42 | 55 |
| 630 | 34 | 40 | 48 | 55 | 38 | 42 | 50 | 65 |
| 833 | 48 | 56 | 68 | 78 | 53 | 59 | 73 | 94 |

Figure A-339. Boeing 747-200B-Passenger

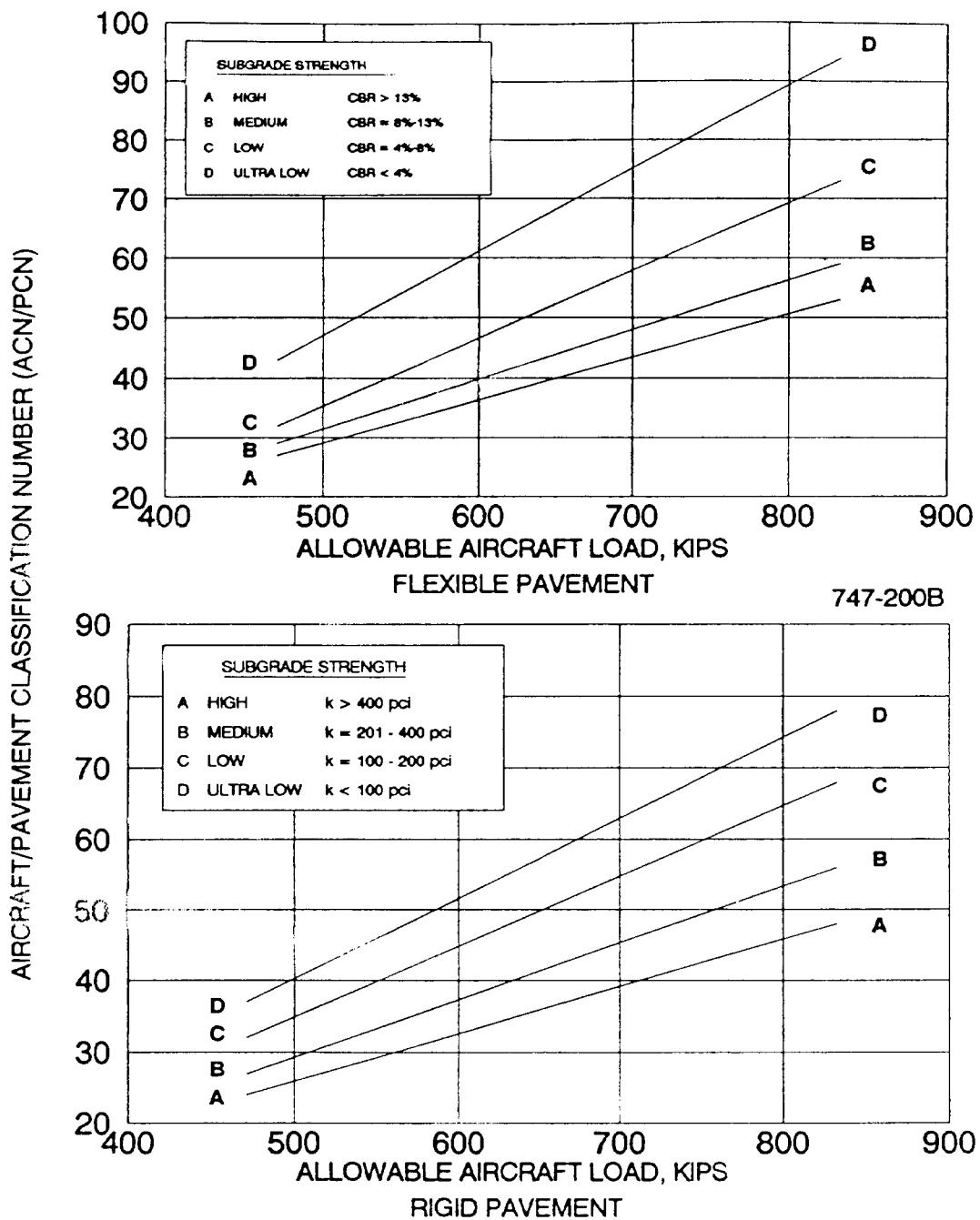


Figure A-340. Boeing 747-200B-Pass., ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT9D-70)

No. of Engines 4 Engine Rating 53,000 lb

Min. T/O Wt. 488.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 833.0 k-lb Max. T/O Wt. War-Time 833.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 621.4 k-lb Max. Ldg. Wt. 630.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,800 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

| Weight | Rigid Pavement Subgrades | | | | Flexible Pavement Subgrades | | | | Very Low D |
|--------|--------------------------|-------------|----------|-------------------|-----------------------------|-------------|----------|----|------------------|
| | High A | Medium B | Low C | Ultra Low D | High A | Medium B | Low C | | |
| 621 | 34 | 39 | 47 | 54 | 37 | 41 | 49 | 64 | |
| 630 | 34 | 40 | 48 | 55 | 38 | 42 | 50 | 65 | |
| 833 | 48 | 56 | 68 | 78 | 53 | 59 | 73 | 94 | |

Figure A-341. Boeing 747-200C-Cargo